

What is claimed is:

- 1 1. A composition comprising a probiotic and a prebiotic.
- 1 2. The composition of claim 1 wherein the probiotic comprises one or more bacteria from  
2 the group consisting of Bifidobacteria and Lactobacillus.
- 1 3. The composition of claim 1 wherein the prebiotic comprises a mucopolysaccharide.
- 1 4. The composition of claim 3 that further comprises pectin.
- 1 5. The composition of claim 3 wherein the prebiotic comprises one or more of the group  
2 consisting of chitin, agar and carragunan.
- 1 6. The composition of claim 3 wherein the prebiotic comprises chitin.
- 1 7. The composition of claim 3 wherein the probiotic comprises one or more of the bacteria  
2 of the group consisting of Bifidobacteria and Lactobacilli.
- 1 8. The composition of claim 3 wherein the probiotic comprises a Lactobacilli.
- 1 9. The composition of claim 8 wherein the probiotic comprises one or more of the group  
2 comprising *L. acidophilus*, *L. casei*, *L. fermentum*, *L. salivarioes*, *L. brevis*, *L.*  
3 *leichmannii*, *L. plantarum* and *L. cellobiosius*.
- 1 10. The composition of claim 3 wherein the probiotic comprises *B. adolescentis*.
- 1 11. The composition of claim 3 wherein the probiotic comprises *L. acidophilus*.
- 1 12. The composition of claim 3 that is formed as part of a tablet.
- 1 13. The composition of claim 3 that is contained within a capsule.
- 1 14. The composition of claim 3 that includes  $10^6$  or more probiotic.
- 1 15. The composition of claim 3 that includes 0.1-10% probiotic and 90-99.9% prebiotic.
- 1 16. The composition of claim 3 that further comprises an oligosaccharide.
- 1 17. The composition of claim 15 that further comprises an oligosaccharide.

- 1 18. A method of directly introducing into the gastrointestinal tract of a human, downstream  
2 of the stomach, the composition of claim 1.
- 1 19. A method of directly introducing into the gastrointestinal tract of a human, downstream  
2 of the stomach, the composition of claim 3.
- 1 20. The method of claim 18 wherein the composition of claim 1 is introduced directly into  
2 the jejunum.
- 1 21. The method of claim 19 wherein the composition of claim 3 is introduced directly into  
2 the jejunum.
- 1 22. The composition of claim 3 wherein the composition is agglomerated into particles and  
2 then dried.
- 1 23. A method of introducing into the intestinal tract of a human, downstream of the stomach,  
2 a beneficial substance, by utilizing a delivery tube having a first end upstream of the  
3 stomach and a second end in the gastrointestinal tract downstream of the stomach, the  
4 method comprising:  
5 (a) introducing the beneficial substance into the first end of the delivery tube; and  
6 (b) allowing the beneficial substance to exit the second end of the delivery tube  
7 where it enters the intestinal tract downstream of the stomach.
- 1 24. The method of claim 23 wherein the beneficial substance is a prebiotic.
- 1 25. The method of claim 23 wherein the beneficial substance is a probiotic.
- 1 26. The method of claim 23 wherein the beneficial substance is a composition comprising a  
2 prebiotic and a probiotic.
- 1 27. The method of claim 23 wherein the second end of the delivery tube is in the jejunum.
- 1 28. The method of claim 23 wherein the first end of the delivery tube is outside of the nose.

- 1 29. The method of claim 24 wherein the prebiotic includes an AG
- 1 30. The method of claim 26 wherein the prebiotic includes an AG.
- 1 31. The method of claim 24 wherein the prebiotic includes a non-starch polysaccharide.
- 1 32. The method of claim 26 wherein the prebiotic includes a non-starch polysaccharide.
- 1 33. The method of claim 24 wherein the prebiotic includes a mucopolysaccharide.
- 1 34. The method of claim 26 wherein the prebiotic includes a mucopolysaccharide.
- 1 35. The method of claim 24 wherein the prebiotic includes an oligosaccharide.
- 1 36. The method of claim 26 wherein the prebiotic includes an oligosaccharide.
- 1 37. The method of claim 36 wherein the prebiotic includes a FOS.
- 1 38. The method of claim 37 wherein the prebiotic includes a FOS.
- 1 39. The method of claim 25 wherein the probiotic includes a Bifidobacteria.
- 1 40. The method of claim 26 wherein the probiotic includes a Bifidobacteria.
- 1 41. The method of claim 40 wherein the probiotic includes B. adolescentis.
- 1 42. The method of claim 41 wherein the probiotic includes B. adolescentis.
- 1 43. The method of claim 25 wherein the probiotic includes Bacteroides.
- 1 44. The method of claim 26 wherein the probiotic includes Bacteroides.
- 1 45. The method of claim 25 wherein  $10^6$  or greater probiotic are introduced into the first end  
2 of the delivery to be.
- 1 46. The method of claim 26 wherein  $10^6$  or greater probiotic are introduced into the first end  
2 of the delivery to be.
- 1 47. The method of claim 24 wherein the prebiotic includes inulin.
- 1 48. The method of claim 26 wherein the prebiotic includes inulin.
- 1 49. The method of claim 23 wherein the delivery to be is an enteral to be feeding device.

- 1 50. The method of claim 26 wherein the composition comprises 0.1-10% probiotic and 90-  
2 99.9% prebiotic.
- 1 51. The method of claim 26 wherein the composition comprises 1-10% probiotic and 90-99%  
2 prebiotic.
- 1 52. The method of claim 26 wherein the composition comprises 0.1-99% probiotic and 1-  
2 99.9% prebiotic.
- 1 53. The method of claim 24 wherein the prebiotic comprises one or more of the group  
2 consisting of chitin, agar and carraginan.
- 1 54. The method of claim 26 that comprises a mucopolysaccharide and an  
2 oligopolysaccharide.
- 1 55. The method of claim 26 wherein the prebiotic comprises one or more of the group  
2 consisting of chitin, agar and carraginan.
- 1 56. The method of claim 24 wherein the prebiotic has a particle size of 25 microns or less.
- 1 57. The method of claim 26 wherein the prebiotic has a particle size of 25 microns or less.
- 1 58. The method of claim 26 wherein the probiotic has a particle size of 25 microns or less.
- 1 59. The method of claim 23 wherein an enteral food is also introduced into the first end of  
2 the delivery tube and allowed to exit the second end of the delivery tube.